NODAL EXCHANGE

1921 Gallows Road, 3rd Floor
Tysons Corner, VA 22182
Phone (703) 962 9800
Fax (703) 962 9850
www.nodalexchange.com

September 21, 2015

Mr. Christopher J. Kirkpatrick
Secretary
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW
Washington, DC 20581

Re: Comment Letter in response to Solicitation of Comments regarding the ICE Futures U.S. Inc.'s Amendment to Position Limits for New York Independent System Operator Electric Power for Zone G Futures Contracts (Submission No. 15-101)

Dear Mr. Kirkpatrick:

Nodal Exchange, LLC ("Nodal Exchange" or "Exchange") appreciates the opportunity to submit comments with respect to the Commodity Futures Trading Commission's ("CFTC" or "Commission") July 7, 2015 Solicitation of Comments ("Solicitation") regarding ICE Futures U.S. Inc.'s ("ICE") rule submission to amend position limits for its power contracts settling to the New York Independent System Operator's ("NYISO") Zone G prices. As Nodal Exchange explains below, Nodal Exchange believes that ICE's proposal to sum the generation capacity located within Zone G and the Total Transfer Capacity ("TTC") to and from Zone G is a reasonable method for calculating total deliverable supply for NYISO Zone G.

I. Background on Nodal Exchange

As introduction, Nodal Exchange is a designated contract market registered with the Commission that offers cash settled monthly term futures contracts on locations traded in the power markets. Nodal Exchange offers contracts settling to NYISO Zone G for both peak and off-peak hours. These contracts are economically identical to those offered by ICE.

II. Background on deliverable supply for power

The guidance for estimating deliverable supplies in Appendix C to Part 38 of the Commission Regulations found in paragraph (b)(1)(i)(A) says that an estimated

deliverable supply "might represent product which is in storage at the delivery point(s) specified in the futures contract or can be moved economically into or through such points consistent with the delivery procedures set forth in the contract." As power generally cannot be economically stored, deliverable supply for power should be estimated based on the amount of power that can be moved economically into or through a power delivery location -- in this case, NYISO Zone G.

Like many other commodities, power's production sources (power plants) are often geographically separated from the areas where power is consumed, necessitating care in determining how much supply can be delivered to a specific location. Just as agricultural commodities like corn must be placed on transit to be brought to a delivery point for further redistribution, power is placed on transmission lines that allow power to be transmitted from areas of production to areas of consumption. In New York, the largest power plants are not co-located with the population centers in the New York City metro area; instead, they are dispersed across the state in areas where resources are available (e.g., hydro resources for dams) and connected to the areas of demand by high capacity transmission lines. Indeed, demand for power in New York may be met by power generated outside the state; NYISO routinely imports power from other regions (including two Canadian provinces, as well as the PJM and ISO-NE organized markets) to meet its power needs.

Unlike other commodities, however, power can be instantly dispatched. NYISO is responsible for ensuring that supply from generators in New York combined with imports into NYISO match demand within NYISO as well as exports from NYISO at all times. To ensure that supply matches demand, NYISO sends dispatch instructions, which instruct power plants to increase or decrease supply, every five minutes. It should be noted that NYISO is balancing supply and demand across the entire state; any zone may be generating more power than is required in that particular zone because it is exporting power to another zone. Indeed, NYISO's criteria for which power plants will run is the power plant's economic merit order in the state; thus, power plants with very expensive power located close to demand centers may seldom be dispatched, despite their proximity to demand.

NYISO Zone G, also known as Hudson Valley, is located in the southern portion of New York. It is the only supply path by which electricity from the upper regions of the NYISO can reach the New York City metro area and Long Island. The New York City metro area and Long Island are represented by Zones H (Millwood), I (Dunwoodie), J (N.Y.C.) and K (Long Island). According to Nodal Exchange analysis of NYISO's Integrated Real Time Actual Load data, the average load of just NYISO Zones G, J, and K combined is approximately 50% of the total average load in the entire NYISO.

Nodal Exchange would like to point out that the overall trading volumes in ICE's Zone G contracts are not particularly remarkable and do not represent "significantly more electric

Nodal Exchange | 1921 Gallows Road, 3rd Floor | Tysons Corner, VA 22182 | **Phone:** (703) 962 9800 | **Fax:** (703) 962 9850 | **www.nodalexchange.com**

power [than] is generated or used in the entire ISO."[1] The Commission cites in its Solicitation that the NYISO system total usage for 2013 was 163,514 GWh, (or 163.5 TWh)[2], and calculates that the average daily open interest on ICE during 2014 for NYISO Zone G exceeded 11 TWh for off-peak contracts and over 15 TWh for peak contracts for a total representing nearly 27 TWh of average daily open interest in Zone G. Thus, in 2014, the average total market open interest on ICE in NYISO Zone G was less than 17% (27 TWh/163.5 TWh) of NYISO's total usage in 2013, which is not particularly remarkable given NYISO Zone G's importance to supplying power to the key demand areas of New York City and Long Island.

The Solicitation asserts that 2014 traded volumes on ICE for Zone G were 15 TWh for off-peak contracts and 27 TWh for peak contracts, for a total of about 42 TWh. Based on the Commission's calculation, the trading volume on ICE for Zone G was also far below the reported NYISO total usage of 163.5TWh for 2013.[3]

Further, Nodal Exchange would like to note that even if overall market activity did exceed NYISO usage, this would not indicate a potential problem of market manipulation. Many very successful and highly liquid futures contracts have market volumes that are many multiples of the physical market. Position limits are not applicable to overall market activity; rather they are applicable to individual participants' activity in the market.

III. The Commission's Specific Questions for Commenters and Nodal Exchange's Responses

1. *When estimating deliverable supply is nameplate capacity ("NPC") appropriate to reflect the structure of the cash market for the underlying commodity?*

In light of the structure of the power market and the Commission's regulations, Nodal Exchange believes that ICE's proposal to sum the generation capacity in the form of Nameplate Capacity ("NPC") located within Zone G and the TTC to and from Zone G is reasonable. Nodal Exchange believes it is reasonable to include NPC in the estimate of electric power deliverable supply in a particular region, as it is a measure of the supply of power that can be generated within that area to meet demand. However, NPC is inadequate for addressing the entirety of the deliverable supply available to participants in the cash market. Cash market participants in NYISO may have their demand met by local supply or supply from other regions. Thus, NPC must be combined with a measure

---

[1] See the last sentence of the second paragraph of Section I of the Solicitation.
[2] 1TWh (terawatt hour) is equivalent to 1 million MWh. 1,000 GWh are also equivalent to 1 TWh.
[3] Nodal Exchange calculates, based on ICE's daily market reports, that ICE had 121 TWh of traded volume during 2014 on Zone G, which differs significantly from the Commission's calculations, but is still below the 163.5 TWh of usage reported by NYISO in 2013.

of the amount of power that can be transferred into the zone to create a realistic supply estimate.

Clearly, power plants located within Zone G can be used to meet incremental demand. However, imports into Zone G, from either other zones in NYISO or other regions (e.g., PJM, ISO-NE or Canada) altogether can also be used to meet this demand. The ability to import is essentially only limited by the ability of the electric grid to move the required quantity of power. TTC provides a realistic estimate of the ability to move power supply from a myriad of sources into NYISO Zone G.

As NYISO runs the cash market for NYISO Zone G, this estimation of deliverable supply is also consistent with pricing in the cash market. To supply the incremental real time power purchaser in NYISO Zone G, NYISO will dispatch the most economical unit available given the constraints of its electrical grid. This dispatch could be from a plant located within NYISO Zone G, from a plant located in New York state outside Zone G, or be satisfied by increasing the amount imported from Ontario, Quebec, ISO-NE or PJM.

2. *Since all generating units do not operate throughout the day and supply must always equal demand to maintain an electric power systems operations how can these two factors be accounted for in a deliverable supply estimate?*

As the Commission notes, generating units will not be dispatched by the ISO unless their output is required to meet demand. However, this does not mean that they are unavailable to meet demand – as soon as the demand appears in the real time (e.g., cash) market, new units will be dispatched to meet the incremental demand. Thus, Nodal Exchange believes the fact that generators do not operate all day should have no bearing on the deliverable supply calculation.

While it is true for electricity that at any given moment in time supply utilized must equal the demand requested, deliverable supply is the supply that could be delivered to meet demand and not demand itself. If deliverable supply is less than demand, blackouts or brownouts occur. As a result, in the United States electric grids (transmission lines) and generation capacity are managed to ensure that deliverable supply is always greater than demand to ensure electricity reliability.

3. *When estimating deliverable supply, is total transfer capability (TTC) appropriate to reflect the structure of the cash market for the underlying commodity?*

Nodal Exchange believes that TTC is a reasonable way to measure the element of deliverable supply that can be met with transfers into the region. As noted above, a demand in the cash market for power can either be met with generation within the region or an import from another NYISO zone or a region outside NYISO altogether. Hence, Nodal Exchange believes that the NPC within the delivery zone plus the TTC to the zone must both be considered when calculating deliverable supply.

Nodal Exchange | 1921 Gallows Road, 3rd Floor | Tysons Corner, VA 22182 | **Phone:** (703) 962 9800 | **Fax:** (703) 962 9850 | **www.nodalexchange.com**

4. *Does TTC include or exclude electric power generated to meet demand in the zones outside NYISO Zone G? Would it be appropriate to reduce estimated deliverable supply for zones other than Zone G where power contributed to the TTC flows comes from those areas?*

Given the dynamic nature of NYISO's economic dispatch process, it would not be appropriate to reduce estimated deliverable supply for areas outside of Zone G where power is being generated and then subsequently transferred through Zone G. Throughout the operating day one will observe shifts in power flows that depend on a variety of factors (e.g., weather patterns, generation outages) that impact which generators are called up on to meet load in a specific area. For a given hour of the day or day of the month the transfer is economically balanced with intra-ISO generation as well as imports and exports. While a zone may be a source of power imports one hour, it may become a user of power exports the next hour. Trading entities need the flexibility to cover their entire obligation that may at anytime include importing, exporting, or passing through generation supply to meet demand.

5. *What adjustment to TTC should be made to account for demand, transmission and node constraints? Is the use of a flowgate model appropriate to account for TTC?*

For the purposes of calculating position limits no adjustment should be made to the TTC to account for demand, transmission, or node constraints. The actual TTC during an operating day may be impacted by all three but these constraints are generally highly variable and inappropriate for the calculation of exchange position limits. By the time one implemented a specific transmission constraint in the TTC calculation it would likely no longer be an active constraint on the system.

In the same manner, a flowgate model is useful to the NYISO system operators to determine transfer capability during various hours of operation and may impact the actual scheduling of imports and exports but is inappropriate for an exchange position limit calculation. Flowgate models can only be run by a grid operator using information that is not publicly disclosed and subject to frequent change.

6. *Is the use of historic capacity electric power data appropriate for the estimation of deliverable supply? Or should historic flow data for that zone be used, where available?*

As upgrades to the transmission grid can change its capacity, Nodal Exchange does not believe it is appropriate to look far back historically at grid capacity data. While flow data provides a reference point for what flows did occur, the flow data does not provide a ceiling on the capacity of the transmission grid to meet incremental demand, so Nodal Exchange does not believe historical flow data is appropriate for deliverable supply calculations.

Nodal Exchange | 1921 Gallows Road, 3rd Floor | Tysons Corner, VA 22182 | **Phone:** (703) 962 9800 | **Fax:** (703) 962 9850 | **www.nodalexchange.com**

7. *How does NPC and/or TTC relate to historical electric power flows?*

Nodal Exchange does not believe that attempting to connect NPC and TTC to historical power flows is a fruitful way to determine appropriate position limit levels for power. As noted above, historical power flows represent how power historically flowed, but do not answer the question of whether additional deliverable supply is available at a particular location.

8. *Is the use of average load appropriate to estimate supply of electric power over a period of time at a zone?*

Nodal Exchange does not believe load, which is a measure of demand, should be used to determine deliverable supply.

Electricity demand has significant differentials even within peak and off-peak cycles. In peak cycles demand can grow exponentially throughout the peak period beginning in the morning and into the afternoon depending on weather patterns and usage. The capacity necessary to serve load in areas is calibrated to what is required at the maximum expected demand level plus a reserve margin in case the area suffers a loss of generation or maximum expected demand is in fact exceeded. Average load thus can drastically underestimate the maximum requirements during a particular time and does not reflect deliverable supply.

9. *What adjustments if any should be made for historical load data containing periods of exceptionally high or low load for the zone?*

As noted earlier, load is a measure of demand, and not supply, and thus should not be a factor in the calculation to determine deliverable supply.

10. *To what extent do the current ICE deliverable supply estimates for the futures contract for NYISO Zone G electric power contracts reflect seasonality effects on the market?*

Power consumption (load) does follow predictable seasonality; for NYISO, load tends to be higher in the summer and winter, and lower in the spring and fall. However, deliverable supply is relatively constant throughout the year, and so Nodal Exchange does not believe seasonality should be a major factor in determining deliverable supply for position limits.

11. *Is it appropriate to calculate two separate estimates of deliverable supply for both peak and off-peak electric power futures contracts?*

Nodal Exchange does not believe it is necessary to calculate a separate estimate for deliverable supply for peak and off-peak electric power contracts, as peak and off-peak

Nodal Exchange | 1921 Gallows Road, 3rd Floor | Tysons Corner, VA 22182 | **Phone:** (703) 962 9800 | **Fax:** (703) 962 9850 | **www.nodalexchange.com**

are a measure of demand periods rather than supply periods. For all practical purposes, supply available during peak hours is also available during off-peak hours.

12. *What, if any, other factors should be considered by ICE in estimating supply of electric power that would be available at NYISO Zone G in a particular month?*

Nodal Exchange reiterates that the inclusion of the generation NPC and the overall TTC for the area provides a sufficient estimate. This approach is logical, straightforward and transparent.

13. *Is it appropriate to calculate deliverable supply on historical delivered electric power to account for the merit-order curve? Is another method more appropriate?*

The merit order curve should not be used in calculating deliverable supply given the fact that generation cost structures change over time and are dependent on many public and non-public data points and transactions. As the overall stack can change through simple retirement, fuel switching, or a site converting from one fuel source to another and given that not all of these data are public and accessible to the exchanges, the best mechanism to determine plant capability is to use publicly available sources that address the known physical characteristics of the plant.

14. *When estimating deliverable supply should there be reductions made for ancillary services (e.g. load following, frequency response, spinning reserve capacity, etc.) given their role in normal grid operations?*

Ancillary services are a key component of the products that generators supply to the grid at any point in time. These services are represented by the overall NPC of the generator unit and should be included in the overall deliverable supply calculation. The flexibility of the unit to provide ancillary services whether it be frequency response, automatic generation control, or spinning reserve should not preclude its total power output capability from being included as these services are not always called upon for any given unit. In addition, an entity that does provide these ancillary services should not be precluded from contracting at the relevant power price to hedge the ancillary services it provides.

15. *How does the methodology of estimating deliverable supply impact the contracts hedging or price-basing utility?*

A useful methodology for estimating deliverable supply is one that represents the trading activity and business purposes of those trading in the contract. The inclusion of TTC, for example, supports those supplying and moving power through various interfaces and zones to its end destination. For those with assets, either generation or load responsibility in the zone, the inclusion of the generation capacity as a metric provides a contract base that allows them to hedge a portion or all of the supply they manage within the area

Nodal Exchange | 1921 Gallows Road, 3rd Floor | Tysons Corner, VA 22182 | Phone: (703) 962 9800 | Fax: (703) 962 9850 | www.nodalexchange.com

represented by the contract and not be overly restricted in how they manage their portfolio of obligations.

16. *How should deliverable supply estimates relate to the speculative position limits and accountability levels for similar contracts traded on other exchanges be viewed?*

Nodal Exchange believes the position limits and accountability levels for economically equivalent contracts should be based on the same deliverable supply estimate for any exchange offering the contract.

17. *To what extent should consideration be given to environmental constraints, ramp-rate limits, dynamic constraints, start-up costs, operation scheduling, no-load costs, and pricewise linear cost curves when estimating deliverable supply?*

Nodal Exchange does not believe the addition of physical generation unit characteristics such as ramp rates is helpful in understanding deliverable supply. Some unit characteristics may influence a generation unit's capability to deliver above the NPC for periods of time, but we believe many of these factors are likely commercially sensitive to the generation owner, and therefore difficult to know, whereas generation NPC is publicly available. Nodal Exchange also does not believe adding the start-up or operating cost information to the deliverable supply calculation is helpful in coming to a view on whether the supply is deliverable given these characteristics may impact daily dispatch but not capability over time.

IV. Conclusion

Nodal Exchange believes that ICE's proposal for the calculation of deliverable supply represents a reasonable proposal for the calculation of the amount of power that can be supplied to a location on the power grid. Unlike other commodity markets, the organized power markets have a dedicated organization – the Independent System Operator or Regional Transmission Organization – that assumes the responsibility of making sure there is enough supply to meet demand. Using TTC and NPC for the deliverable supply calculation, and therefore the resulting position limits, creates position limit values that allow participants in the power markets to effectively hedge.

Nodal Exchange appreciates the opportunity to provide these comments. Please contact me at (703) 962-9835 if you have any questions regarding these comments.

Regards

Anita Herrera
General Counsel & Chief Regulatory Officer

Nodal Exchange | 1921 Gallows Road, 3rd Floor | Tysons Corner, VA 22182 | **Phone:** (703) 962 9800 | **Fax:** (703) 962 9850 | **www.nodalexchange.com**